
8. Pattern

Program Name: Pattern.java

Input File: pattern.dat

There are patterns that appear in poetry and music. Songs for example often utilize the AABA form, while narrative motifs often employ a Chiastic structure, such as ABBA, to compare and contrast details of particular importance. As a first step in developing the software to determine whether a particular passage matches a specific pattern, you are asked to determine if a short phrase matches a particular pattern.

Input

The first line of input contains an integer T, the number of test cases in the input.

Each of the following T test cases consists of two lines. The first line contains an uppercase alphabetical character pattern, like ABBA, and the second line contains a phrase consisting of space delimited lowercased words.

Output

For each pattern and phrase pair, determine if the words match the pattern, as in there exists some distinct mapping of each unique character in the pattern to a unique word.

Constraints

1 <= T <= 100

1 <= Length of character pattern <= 32

Example Input File

```
3
ABBA
hello world world hello
RAD
happy happy day
NEVER
foo bar baz qux waldo
```

Example Output to Screen

```
Matches
Does Not Match
Does Not Match
```

Explanation of Example Output

In the first case, A matches with hello and B matches with world.

In the second case, happy is not distinct as it would have to match both R and D.

In the third case, E is not distinct as it would have to match both bar and qux.